

CLAIMS:

1. A method of interfacing between a host application program and a data storage card having an associated card application, comprising the steps of:

identifying the particular card application from the card,  
selecting from a store of a number of protocols for a number of different card applications the appropriate lower level protocol for the identified card application,  
translating high level language host application program commands to corresponding commands within said identified lower level protocol and writing said corresponding commands to said card and translating commands or data in said selected lower level protocol from said card into corresponding commands or data in said high level language to said host application program.

2. A method according to claim 1 wherein identifying the particular card application includes the steps of reading from the card a data string which characterizes the card application and matching said read data string with a card application-characterizing string from a plurality of stored card application-characterizing strings, corresponding to a plurality of different data storage card applications, to thereby identify the card application.

3. A method as claimed in either claim 1 or claim 2 including the step of identifying high level language host program commands not supported by said card application and upon identifying an unsupported command, returning an error command to said host program.

4. A method of interfacing between a host application program and an electronic data storage card having an associated card application, comprising:

(1) storing first data arrays containing strings of different card application-characterizing data and for each string its corresponding card identifier, and second data arrays containing card identifiers and for each identifier its corresponding command strings,

1           (2)     detecting a card presented to a read/write station communicating with the  
2     host application program and passing a card detect signal to said host application  
3     program,

4           (3)     reading from the card the data string which characterizes the card  
5     application,

6           (4)     searching through at least one said first array for a matching data string,  
7     and upon making a successful match retrieving the corresponding card application  
8     identifier,

9           (5)     selecting the appropriate command strings in said second array using the  
10    retrieved card application identifier,

11          (6)     translating host program instructions to commands appropriate to the card  
12    application using the selected command strings from the second array, and

13          (7)     either reading or writing data to said card in accordance with said host  
14    program instructions.

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16    5.     A method of enabling host application software to interface with any known type  
17    of smartcard or other data storage card devices having an associated card application,  
18    comprising:

19          (1)     reading from the card to be interfaced the data string which characterizes a  
20    particular card application,

21          (2)     searching through a first data array containing strings of different card  
22    application-characterising data, and for each string its corresponding card application  
23    identifier, for a matching data string, and upon making a successful match retrieving the  
24    corresponding card identifier,

25          (3)     selecting the appropriate command strings from a second data array  
26    containing card application identifiers, and for each identifier its corresponding command  
27    strings, using the retrieved card application identifier,

28          (4)     translating generic host application instructions to lower level commands  
29    appropriate to the card application being interfaced using the selected command strings  
30    from said second data array, and

1                   (5)     causing data to be either read from or written to said card in accordance  
2     with said generic instructions.

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